CLAIMS

What is claimed is:

1. A method for phonetic recognition, for using principles of phonetic recognition and a general database of phonetic sounds and corresponding characters to conduct phonetic recognition, without requiring a database of personal phonetic sounds and corresponding characters; the method for phonetic recognition comprising the steps of:

> (1) processing a phonetic sound generated by a user and transforming the phonetic sound into a phonetic waveform;

> (2) dividing a sound packet of the phonetic waveform into different parts;

> (3) recognizing the different parts of the sound packet respectively;

> (4) combining the recognized parts for determining a character corresponding to the phonetic sound; and

> (5) completing the phonetic recognition.

2. The method of claim 1, wherein in the step (2), the sound packet of the phonetic waveform is divided into the parts of consonant, wind and vowel.

3. The method of claim 2, wherein the part of consonant has a waveform of gradation, affricate, extrusion and plosive; the part of vowel has repeated waveform packets, and has characteristic parameters including turning number, wave number and slope; and the part of wind is much higher in frequency than the parts of consonant and vowel.

4. The method of claim 3, wherein in the step (3), the part of vowel is processed to divide the repeated waveform packets thereof, so as to recognize the parts of consonant and vowel respectively.

5. A method for phonetic recognition, for using principles of phonetic recognition and a general database of phonetic sounds and corresponding characters to conduct phonetic recognition, without requiring a database of personal phonetic

sounds and corresponding characters; the method for phonetic recognition comprising the steps of:

    (1) processing a phonetic sound generated by a user and transforming the phonetic sound into a phonetic waveform;

    (2) analyzing physical properties of the phonetic waveform for acquiring characteristic parameters of the waveform;

    (3) dividing a sound packet of the phonetic waveform into parts of consonant, wind and vowel, according to the characteristic parameters;

    (4) analyzing the parts of consonant and vowel for waveform characteristics thereof, so as to recognize a character consonant corresponding to the part of consonant and a character vowel corresponding to the part of vowel;

    (5) combining the recognized character consonant and character vowel for obtaining a corresponding character; and

    (6) completing the phonetic recognition.

6.   The method of claim 5, wherein the part of consonant has a waveform of gradation, affricate, extrusion and plosive; the part of vowel has repeated waveform packets, and has characteristic parameters including turning number, wave number and slope; and the part of wind is much higher in frequency than the parts of consonant and vowel.

7.   The method of claim 6, wherein in the step (4), the part of vowel is processed to divide the repeated waveform packets thereof, so as to recognize the parts of consonant and vowel respectively.

8.   A method for phonetic recognition, for using principles of phonetic recognition and a general database of phonetic sounds and corresponding characters to conduct phonetic recognition, without requiring a database of personal phonetic sounds and corresponding characters; the method for phonetic recognition comprising the steps of:

    (1) processing a phonetic sound generated by a user and transforming the phonetic sound into a phonetic waveform;

    (2) dividing a sound packet of the phonetic waveform into different parts, and determining a fore frequency and a rear frequency of the sound packet;

    (3) recognizing the different parts of the sound packet respectively, and recognizing a tone for the phonetic sound according to a rule for determining the fore and rear frequencies;

    (4) combining the recognized parts and the recognized tone for determining a corresponding character for the phonetic sound; and

    (5) completing the phonetic recognition.

9. The method of claim 1, wherein in the step (2), the sound packet of the phonetic waveform is divided into the parts of consonant, wind and vowel.

10. The method of claim 9, wherein the part of consonant has a waveform of gradation, affricate, extrusion and plosive; the part of vowel has repeated waveform packets, and has characteristic parameters including turning number, wave number and slope; and the part of wind is much higher in frequency than the parts of consonant and vowel.

11. The method of claim 10, wherein in the step (3), the part of vowel is processed to divide the repeated waveform packets thereof, so as to recognize the parts of consonant and vowel respectively.

12. The method of claim 8, wherein in the step (2), the fore frequency is determined by taking an average frequency for a first quarter region of the sound packet, and the rear frequency is determined by taking an average frequency for a final quarter region of the sound packet.

13. A method for phonetic recognition, for using principles of phonetic recognition and a general database of phonetic sounds and corresponding characters to conduct phonetic recognition, without requiring a database of personal phonetic

sounds and corresponding characters; the method for phonetic recognition comprising the steps of:

    (1) processing a phonetic sound generated by a user and transforming the phonetic sound into a phonetic waveform;

    (2) analyzing physical properties of the phonetic waveform for acquiring characteristic parameters of the waveform, and determining a fore frequency and a rear frequency of the sound packet;

    (3) dividing a sound packet of the phonetic waveform into parts of consonant, wind and vowel, according to the characteristic parameters;

    (4) analyzing the parts of consonant and vowel for waveform characteristics thereof, so as to recognize a character consonant corresponding to the part of consonant and a character vowel corresponding to the part of vowel, and recognizing a tone for the phonetic sound according to a rule for determining the fore and rear frequencies;

    (5) combining the recognized parts of consonant and vowel and the recognized tone for determining a corresponding character for the phonetic sound; and

    (6) completing the phonetic recognition.

14. The method of claim 13, wherein the part of consonant has a waveform of gradation, affricate, extrusion and plosive; the part of vowel has repeated waveform packets, and has characteristic parameters including turning number, wave number and slope; and the part of wind is much higher in frequency than the parts of consonant and vowel.

15. The method of claim 14, wherein in the step (4), the part of vowel is processed to divide the repeated waveform packets thereof, so as to recognize the parts of consonant and vowel respectively.

16. The method of claim 13, wherein in the step (2), the fore frequency is determined

by taking an average frequency for a first quarter region of the sound packet, and the rear frequency is determined by taking an average frequency for a final quarter region of the sound packet.

17. A system for phonetic recognition, for using principles of phonetic recognition and a general database of phonetic sounds and corresponding characters to conduct phonetic recognition, without requiring a database of personal phonetic sounds and corresponding characters; the system for phonetic recognition comprising:

a phonetic recognition principle database including principles of phonetic recognition to be used for processing a sound packet of a phonetic sound and dividing the sound packet into parts of consonant, wind and vowel, so as to recognize the parts of consonant, wind and vowel respectively, and combine the recognized parts of consonant and vowel to be compared with a database of phonetic sounds and corresponding characters for obtaining a corresponding character for the phonetic sound;

a database of phonetic sounds and corresponding characters, wherein a phonetic sound consists of a consonant and a vowel, and has a corresponding character;

a phonetic transformation processing module for transforming a user's phonetic sound into a corresponding physical waveform signal and inputting the waveform signal to a phonetic recognition processing module for phonetic recognition; and

a phonetic recognition processing module, according to the principles of phonetic recognition in the phonetic recognition principle database, for processing the waveform signal by dividing a sound packet thereof into parts of consonant, wind and vowel, and recognizing the parts respectively, so as to combine the recognized parts of consonant and vowel to be compared with the database of phonetic sounds and

corresponding characters for obtaining a corresponding character for the phonetic sound.

18. A system for phonetic recognition, for using principles of phonetic recognition and a general database of phonetic sounds and corresponding characters to conduct phonetic recognition, without requiring a database of personal phonetic sounds and corresponding characters; the system for phonetic recognition comprising:

a phonetic recognition principle database including principles of phonetic recognition to be used for processing a sound packet of a phonetic sound and dividing the sound packet into parts of consonant, wind and vowel, and determining a fore frequency and a rear frequency for the sound packet, so as to recognize the parts respectively, recognize a tone for the phonetic sound according to rules for determining the fore and rear frequencies, and combine the recognized parts of consonant and vowel or the recognized parts of consonant and vowel together with the recognized tone to be compared with a database of phonetic sounds and corresponding characters for obtaining a corresponding character for the phonetic sound;

a database of phonetic sounds and corresponding characters, wherein a phonetic sound consists of a consonant and a vowel, or a consonant, a vowel and a tone, and has a corresponding character;

a phonetic transformation processing module for transforming a user's phonetic sound into a corresponding physical waveform signal and inputting the waveform signal to a phonetic recognition processing module for phonetic recognition; and

a phonetic recognition processing module, according to the principles of phonetic recognition in the phonetic recognition principle database, for processing the waveform signal by dividing a sound packet thereof into parts of consonant, wind and

vowel, and determining a fore frequency and a rear frequency for the sound packet, so as to recognize the parts respectively, recognize a tone for the phonetic sound according to a rule for determining the fore and rear frequencies, and combine the recognized parts of consonant and vowel or the recognized parts of consonant and vowel together with the recognized tone to be compared with the database of phonetic sounds and corresponding characters for obtaining a corresponding character for the phonetic sound.

19. The system of claim 17, wherein the principles of phonetic recognition in the phonetic recognition principle database include a rule for dividing the sound packet into the parts of consonant, wind and vowel; a rule for recognizing the parts of consonant, wind and vowel; and a rule for combining the recognized parts of consonant and vowel.

20. The system of claim 18, wherein the principles of phonetic recognition in the phonetic recognition principle database include a rule for dividing the sound packet into the parts of consonant, wind and vowel; a rule for determining the fore and rear frequencies; a rule for recognizing the parts of consonant, wind and vowel; a rule for recognizing the tone for the phonetic sound; a rule for combining the recognized parts of consonant and vowel; and a rule for combining the recognized parts of consonant and vowel and the recognized tone.